



Complete Summary

TITLE

Acute myocardial infarction/chest pain: median time from emergency department (ED) arrival to ECG (performed in the ED prior to transfer) for acute myocardial infarction (AMI) or chest pain patients (with probable cardiac chest pain).

SOURCE(S)

Centers for Medicare & Medicaid Services (CMS). Specifications manual for hospital outpatient department quality measures (v 2.1a). Baltimore (MD): Centers for Medicare & Medicaid Services (CMS); 2009. 245 p.

Measure Domain

PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the time (in minutes) from emergency department (ED) arrival to electrocardiogram (ECG) (performed in the ED prior to transfer) for acute myocardial infarction (AMI) or chest pain patients (with *Probable Cardiac Chest Pain*).

RATIONALE

Guidelines recommend patients presenting with chest discomfort or symptoms suggestive of ST-segment elevation myocardial infarction (STEMI) have a 12-lead electrocardiogram (ECG) performed within a target of 10 minutes of emergency department (ED) arrival. Evidence supports reperfusion benefits patients with identified STEMI. The diagnosis and management of STEMI patients is dependent upon practices within the ED. Timely ECGs assist in identifying STEMI patients and

impact the choice of reperfusion strategy. This measure will identify the median time to ECG for chest pain or AMI patients and potential opportunities for improvement to decrease the median time to ECG.

PRIMARY CLINICAL COMPONENT

Acute myocardial infarction (AMI); chest pain (probable cardiac chest pain); angina; acute coronary syndrome; ST-segment elevation myocardial infarction (STEMI); electrocardiogram (ECG)

DENOMINATOR DESCRIPTION

Patients 18 years and older with an emergency department (ED) encounter who were discharged/transferred to a short-term general hospital for inpatient care or to a Federal healthcare facility with a diagnosis of acute myocardial infarction (AMI) or angina, acute coronary syndrome, or chest pain and receiving an electrocardiogram (ECG)

NUMERATOR DESCRIPTION

Continuous variable statement: Time (in minutes) from emergency department (ED) arrival to electrocardiogram (ECG) (performed in the ED prior to transfer) for acute myocardial infarction (AMI) or chest pain patients (with *Probable Cardiac Chest Pain*)

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE CRITERION OF QUALITY

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

NATIONAL GUIDELINE CLEARINGHOUSE LINK

- [\(1\) ACC/AHA guidelines for the management of patients with ST-elevation myocardial infarction. A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines \(Committee to revise the 1999 guidelines for the Management of Acute Myocardial Infarction\).](#) (2) [2007 focused update of the ACC/AHA 2004 guidelines for the management of patients with ST-elevation myocardial infarction. A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines.](#)

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Unspecified

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

External oversight/Medicare
Internal quality improvement

Application of Measure in its Current Use

CARE SETTING

Hospitals

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Measure is not provider specific

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Single Health Care Delivery Organizations

TARGET POPULATION AGE

Age greater than or equal to 18 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

Unspecified

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

Unspecified

UTILIZATION

Unspecified

COSTS

Unspecified

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness
Timeliness

Data Collection for the Measure

CASE FINDING

Users of care only

DESCRIPTION OF CASE FINDING

Patients 18 years and older with an emergency department (ED) encounter who were discharged/transferred to a short-term general hospital for inpatient care or to a Federal healthcare facility with a diagnosis of acute myocardial infarction (AMI) or angina, acute coronary syndrome, or chest pain and receiving an electrocardiogram (ECG) (see the "Denominator Inclusions/Exclusions" field)

DENOMINATOR SAMPLING FRAME

Patients associated with provider

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

- An *E/M Code* for emergency department (ED) encounter as defined in Appendix A, OP Table 1.0*
- Patients discharged/transferred to a short term general hospital for inpatient care or to a Federal healthcare facility
- An *International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Principal Diagnosis Code* for acute myocardial

- infarction (AMI) as defined in Appendix A, OP Table 1.1* or an *ICD-9-CM Principal or Other Diagnosis Codes* for angina, acute coronary syndrome, or chest pain as defined in Appendix A, OP Table 1.1a*
- Patients receiving an electrocardiogram (ECG) as defined in the Data Dictionary*

Exclusions

- Patients less than 18 years of age

*Refer to the original measure documentation for details.

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Clinical Condition
Diagnostic Evaluation
Encounter
Institutionalization

DENOMINATOR TIME WINDOW

Time window follows index event

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

Continuous variable statement: Time (in minutes) from emergency department (ED) arrival to electrocardiogram (ECG) (performed in the ED prior to transfer) for acute myocardial infarction (AMI) or chest pain patients (with *Probable Cardiac Chest Pain*)

Exclusions

None

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Fixed time period

DATA SOURCE

Administrative data
Medical record

LEVEL OF DETERMINATION OF QUALITY

Not Individual Case

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Continuous Variable

INTERPRETATION OF SCORE

Better quality is associated with a lower score

ALLOWANCE FOR PATIENT FACTORS

Unspecified

STANDARD OF COMPARISON

External comparison at a point in time
External comparison of time trends
Internal time comparison

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

OP-5: hospital outpatient acute myocardial infarction and hospital outpatient chest pain: median time to ECG.

MEASURE COLLECTION

[Hospital Outpatient Department Quality Measures](#)

MEASURE SET NAME

[Hospital Outpatient Acute Myocardial Infarction](#)

DEVELOPER

Centers for Medicare & Medicaid Services

FUNDING SOURCE(S)

United States Department of Health and Human Services

COMPOSITION OF THE GROUP THAT DEVELOPED THE MEASURE

Centers for Medicare & Medicaid (CMS) Contractor

FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST

None

ENDORSER

National Quality Forum

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2008 Apr

REVISION DATE

2009 Jan

MEASURE STATUS

This is the current release of the measure

SOURCE(S)

Centers for Medicare & Medicaid Services (CMS). Specifications manual for hospital outpatient department quality measures (v 2.1a). Baltimore (MD): Centers for Medicare & Medicaid Services (CMS); 2009. 245 p.

MEASURE AVAILABILITY

The individual measure, "OP-5: Hospital Outpatient Acute Myocardial Infarction and Hospital Outpatient Chest Pain: Median Time to ECG," is published in the "Specifications Manual for Hospital Outpatient Department Quality Measures (Version 2.1a)." This document is available from the [QualityNet Web site](#). Check the QualityNet Web site regularly for the most recent version of the specifications manual and for the applicable dates of discharge.

NQMC STATUS

This NQMC summary was completed by ECRI Institute on February 20, 2009. The information was verified by the measure developer on May 8, 2009.

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